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ABSTRACT

This five-part report provides a summary of the findings and recommendations resulting from a study conducted to determine the most suitable sites for three Metropolitan Junior College (MJC) campuses and to formulate long-range plans for the development of a comprehensive institution. After presenting introductory material, Part I notes problems in the initial site selection for MJC campuses and offers conclusions regarding population growth, educational needs of the workforce, educational level of the population, recommended program offerings, and projected enrollment. Next, a series of recommendations are enumerated relating to site selection and development, financing, organization for development, and programs. Part II provides an economic and demographic profile of the Kansas City metropolitan area, examining economic growth potential, manpower requirements to 1975, population growth dynamics, and population projections. Enrollment demands for MJC are projected in terms of national trends and the educational needs and providers in the MJC service area in Part III. Part IV outlines an educational program for MJC, emphasizing basic principles for its success and improvements required in college-parallel and occupational education programs and in personnel services. Finally, Part V addresses considerations affecting location, location alternatives, site selection and evaluation, facility needs, development costs, financial resources, and operating requirements. (KL)

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A
DEVELOPMENT PROGRAM
FOR
METROPOLITAN JUNIOR COLLEGE
KANSAS CITY

VOLUME ONE
EXECUTIVE SUMMARY

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REPORT
TO
BOARD OF TRUSTEES
METROPOLITAN JUNIOR COLLEGE DISTRICT—KANSAS CITY
KANSAS CITY, MISSOURI

May 1968

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FORWARD

This is the report of record of a study by Arthur D. Little, Inc., on the planning and development of a truly comprehensive Metropolitan Junior College for Kansas City, Missouri region. The study was initiated in July, 1967. The basic research was completed in January of 1968, and an oral report of our recommendations was made to the Board of Trustees and the Citizen's Advisory Committee in mid-February of 1968. Since that time, we have met with numerous individuals and groups to discuss our recommendations at length and to solicit comments and reactions that will be helpful to the Board of Trustees during the coming stages of implementation.

For ease of review and action, our report has been organized into three volumes. Volume One is an executive summary that includes all of the relevant information for Board action. Volume Two presents detailed enrollment forecasts and guidelines for planning the educational program and the facilities needed to house the program. Volume Three contains background information on the region's economy and population and the future manpower requirements that will have to be met by the educational system.

ACKNOWLEDGEMENTS

The Arthur D. Little, Inc., study team is deeply appreciative of the fine cooperation and valuable assistance we received from many people in Kansas City and elsewhere during the course of this project. Although we cannot possibly acknowledge by name the hundreds of individuals and groups who responded to our questions and requests for information and constructively criticized our developing ideas, we must acknowledge the very considerable support and assistance we received from individuals and groups indicated below.

We especially appreciate the overall guidance and direction provided and the openmindedness demonstrated by Mr. James W. Stephens, President of the Board of Trustees of Metropolitan Junior College, and the other members of the Board: Mr. William L. Cassell, Mr. Reed B. Kenagy, Jr., Mr. Robert P. Lyons, Mrs. Y. B. Wasson and Mrs. Gwendolyn M. Wells. We received full support and cooperation from the Metropolitan Junior College administration. We are particularly indebted to Mr. Howard N. Monnett, Acting President; Mr. William D. Hatley, formerly Administrative Dean of the McGee Campus and now Acting Vice President of the Central Campus; Mr. Robert Hankins, formerly Administrative Dean of the Westport Campus and now Acting Vice President for North and South Campuses and Dean of Continuing Education; and Mr. James H. Sampson, Administrative Assistant to the President. The faculty was responsive and challenging, and therefore most helpful, regarding many aspects of the study, particularly in the area of program needs. We wish to extend our thanks to Mr. Larry W. Cox, President of the Faculty Senate, and Mr. Herbert O. Masters, President of the MJC Chapter of the American Association of University Professors. The study also benefited from the advice and counsel of the college students, many of whom participated in seminar discussions of the role and function of a community college. We wish to thank all of them through Mr. William Campbell, President of the Student Government and Mr. David Boutros, Chairman of the Ad Hoc Committee on Long-Range Planning for Metropolitan Junior College. Miss Linda L. Coulson, Secretary to the Board of Trustees, was extremely helpful in scheduling our activities, arranging for interviews, obtaining needed information, and in performing other secretarial functions in our behalf.

In addition to persons directly connected with the Junior College, we benefited greatly from the assistance and cooperation of numerous public spirited individuals, committees, government organizations, education agencies and groups, business and industrial concerns, special purpose associations, and the news media. The hundreds of people in these various categories were extremely generous with their time and help. We would like to especially acknowledge the assistance of the Citizens Advisory Committee to the Board of Trustees. The Committee met a number of times throughout the study to provide us with guidance and counsel on the educational needs of the region and to review and comment on our conclusions and recommendations. Members of the Committee were also very generous in committing their time to personal interviews as representatives of their respective organizations or personal interests. Members of the Committee are:

Mr. R. Carter Tucker, Chairman
Reverend Shrum Burton, Vice Chairman

Mr. Arthur E. Asel, Jr.
Mr. Robert Barry
Mrs. Donald Becker
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Dr. Earl Thomas
Mrs. Dexter Wasserstrom
Mr. John Wesson
Mr. Burton White
Dr. Starks Williams

Finally, we wish to make special note of the contributions provided by Mr. James D. Marshall, Mr. Dwight Brown, and Mr. Gene Norton of Marshall and Brown, Incorporated; Mr. R. N. Bergendoff and Mr. William Meredith of Howard-Needles-Tammen and Bergendoff; and Mr. Frank W. Moseley of Moseley and Company. These gentlemen and their firms provided a significant amount of information for our analysis of campus development alternatives and provided constructive criticism of many of our emerging conclusions. Although their assistance is gratefully acknowledged, they are to be excluded from any responsibility for the conclusions and recommendations presented in this report.

This project was carried out by members of the professional staff of Arthur D. Little, Inc., under the direction of Dr. Cyril C. Herrmann, Vice President and Manager of our Western Regional Office, and with important assistance from several consultants to ADL who are nationally distinguished for their contributions to higher education in general and to community college planning and development in particular. Mr. William E. Claggett functioned as assistant project director, responsible for day-to-day project coordination and community relations. Other members of the team included: Mr. Kirkor Bozdogan, who provided much of the economic, population and enrollment analysis, Mr. Richard Morrison, Mr. Burton Goldberg, Mr. Roger Malek, and Miss Barbara Jacobson. General James M. Gavin and Dr. Charles C. Halbower participated actively throughout the study as project advisors.

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and coordination, organization for development, and student personnel services; Dr. George L. Hall, President of Arizona Western College at Yuma, who provided assistance in all phases of the study and in particular on the educational implications of alternative development schemes; and Dr. James W. Hobson, Vice Chancellor of Business and Finance, University of California at Los Angeles, and Dr. Jane E. Matson, Staff Specialist in Student Personnel Work, American Association of Junior Colleges, who respectively contributed to our recommendations regarding financial planning and student personnel services.

I. SUMMARY

A. INTRODUCTION

In November 1965, voters of the Metropolitan Junior College District – Kansas City, Missouri, authorized, by a four-to-one majority, the sale of slightly over $25 million in bonds. These bonds were to be used to purchase three sites for the Junior College and to construct buildings on a central site–the first site to be developed.

After conducting a site search and evaluation, the Board of Trustees decided to purchase and develop a 150-acre tract – commonly referred to as the Bennington site – located in the northwestern sector of the Raytown School District. An architectural firm was selected, land purchase was initiated, engineering studies were made, and considerable development planning undertaken.

Shortly after the Bennington site was selected, critical problems developed which threatened the future of Metropolitan Junior College. The metropolitan community was seriously divided on the question of the suitability of the Bennington site to meet the preceived needs of the college district. Although it was geographically near the center of the District, a number of individuals and groups concerned with the future of education in the metropolitan region believed the Bennington site to be too far removed from areas of greatest need. In addition, it was believed that the site did not meet the implied intent of the bond issue.

Because of the adverse public reaction and divided opinion among Board members, the Board decided to halt development work and appoint a Citizen's Advisory Committee to assist in the selection of a consulting firm to undertake a comprehensive study of the problem and formulate long-range plans for the development of a truly comprehensive Metropolitan Junior College. The Board of Trustees and its Citizen's Advisory Committee selected Arthur D. Little, Inc., to carry out this assignment.

B. CONCLUSIONS

The major forces and processes shaping population growth in the Kansas City metropolitan area will produce a far greater demand for educational facilities than ever before. By 1990, the population will be 2.6 million people, or roughly twice the present population, and it will include a much higher proportion of young people if present trends continue: in the 1950-1960 decade, the number of persons in the area under 20 years of age increased by 68.5%, and the number of children ten years or younger increased by 69.4%.

Furthermore, in the 1970's and beyond, at least 50% of the work force will be employed in jobs that require some post-high school education. As a result, the associate degree will ultimately replace the high school diploma as the recognized education base for semi-professional and technical jobs. In the years through 1975, the vigorous and expanding economy of the Kansas City metropolitan area will require about 22,000 new employees

each year to keep pace with replacement and expansion requirements. Roughly half of these new employees will need the education and occupational training that can be provided by a community college.

At the present time, 15.4% of the adult population in the area has completed the equivalent of a junior college education. With the development of a comprehensive community college, this should increase substantially.

A comprehensive community college is greatly in demand and should be developed with all possible speed consistent with sound educational planning and administrative procedures. The college should have a broad academic transfer program and offer a full range of occupational education programs, general education programs, continuing education opportunities for adults, developmental programs, and systematic guidance and counseling services.

We estimate that by the academic year 1979-1980, full-time equivalent enrollment at a comprehensive MJC-KC will reach about 16,000. Total head-count enrollment is expected to reach nearly 27,000 by 1979-1980, of which 19,000 will be part-time students and 7,700 full-time students.

C. RECOMMENDATIONS

1. Site Selection and Development

a. The Metropolitan Junior College District should undertake the simultaneous development of three campuses:

(1) One campus should be centrally located with respect to employment concentrations and high-density residential communities.

(2) One campus should be developed in the northern sector of the District.

(3) One campus should be located in the southeastern sector of the District.

b. Each campus should be of equal status and should offer a comprehensive educational program. Programs should be differentiated only when enrollment levels are not high enough to economically sustain courses and/or facilities at more than one campus location or in instances where widespread community interest requires the provision of specialized programs.

c. All sites should be purchased immediately to minimize the total long-range development costs of the system and to ensure the best location of campuses to meet the District's immediate and future needs.

d. The Central site should be planned to ultimately accommodate 5,000 full-time equivalent day students by 1980. We recommend that the Central Campus be located on a 30-acre site in Kansas City bounded on the north by 31st Street, on the south by 33rd Street, the Southwest Trafficway to the west, and Broadway to the east. The site is readily identified by the new BMA office building and Penn Valley Park situated immediately to the north.

e. The Northern Campus should be developed to serve a 1980 campus population of 2500 full-time equivalent day students. We recommend that a site of approximately 100 acres be purchased in the vicinity of Highway 152, generally at or between the intersections of Highway 1 and Highway 69.

f. The Southern Campus should be planned to serve a 1980 full-time equivalent (FTE) day enrollment of 4500 students. A site of approximately 100 acres should be purchased near the centroid of the communities of Lee's Summit, Raytown, Hickman Mills and Grandview.

g. Development of the three-campus system should be undertaken in two major phases. The first phase would be aimed at providing for a District enrollment of 7500 FTE day students. The second phase should be planned to accommodate an additional 4500 FTE day students for a total District enrollment of 12,000 FTE day students by 1980. This would accommodate a total FTE enrollment of slightly over 16,000, representing almost 27,000 persons seeking higher educational opportunities at MJC.

(1) The first phase should provide for a six-year planning period from 1968 to 1974 and include site acquisition and a building construction program to house 3500 full-time equivalent day students at the Central Campus; site acquisition and construction of interim facilities for 1500 FTE day students at the North Campus; and site acquisition and construction of initial facilities for 2500 FTE day students at the South Campus.

(2) At both the North and South campuses, a student services center and instructional facility should be constructed that would serve students during the development period as well as upon completion of campus development envisioned at this time.

(3) The second phase of development should be planned for the six-year period beginning no later than 1974 and provide for construction of facilities to house an additional 1500 full-time equivalent day students at the Central Campus; new construction for complete development of the North Campus to accommodate 2500 FTE day students; and new construction for complete campus development to accommodate 4500 FTE day students at the South Campus.

h. All elements of the system must be initiated simultaneously and immediately to fully meet the needs of the District, but special attention should be given to providing interim facilities on both the North and South Campuses for occupancy by September 1969. The target date for occupancy of the first permanent buildings on the Central Campus should be September 1970, and no later than September 1971.

i. The building currently leased at 560 Westport Road should be purchased immediately. The facilities should continue to serve the academic needs of the District until such time as space is available at the three campuses. Over the longer term, the building can serve as the central District offices and also accommodate warehousing and distribution functions.

j. Land, and options to purchase land, now held by the District should be retained until all sites have been acquired. If, at that time, the land and options have not been used for trading purposes, then such properties should be disposed of for the most economical benefit to the District.

k. Each of the three campuses should be planned for a full complement of facilities–academic, occupational and other instructional spaces; learning resources centers; administrative, faculty, counseling and placement offices; student unions; and spaces and facilities for recreation, music, drama and the arts.

2. Financing

a. The district should utilize all forms of available financing methods to develop and operate the system. In particular, the district should issue self-liquidating revenue bonds for construction of student unions on each of the three campuses.

b. The district should seek revenue bond financing, special State grants and private investment to develop parking structures for the Central Campus. For utilization of the parking structures, students should pay a minimal fee consistent with practices elsewhere in the state.

c. Development of a campus system should be planned to obtain maximum federal aid for eligible building construction.

d. To fully meet the post-high school educational needs of District residents during the mid and late 1970's, the district should plan now for a second general obligation bond issue to be authorized in the early 1970's.

e. The District should seek and promote a change in the state aid formula to more realistically reflect current costs of education.

f. Tuition charges should be evaluated in the light of current and future increases in operating costs. Tuition rates should be increased only after all other sources of financing have been exhausted. Any increase, however, should be in the proper perspective of the cost of education at other two-year institutions and should be consistent with the open door admissions policy.

g. The District should seek and promote a change in the statutory limitation on the maximum tax levy that can be imposed by a junior college district without voter

approval. To meet generally increasing costs, the statutory limitations should be raised to a minimum of $0.20 per hundred dollars of assessed valuation.

h. The District should seek and promote a state scholarship fund so no potential student is denied an education because he lacks the financial resources.

i. MJC-KC should align itself with other Missouri junior colleges and with the necessary foci of political power, to ensure that a proper share of federal vocational education funds are allocated to junior colleges by the state director of vocational education. These steps will be especially necessary if a number of new "area vocational schools" are established in Missouri in the next few years.

3. Organization for Development

a. A District President should be appointed at the earliest opportunity. We strongly suggest that he be appointed no later than June 30 in order for the College to fully implement our recommendations.

b. A chief administrative officer should be appointed for the Central Campus. Until facilities are available elsewhere, the Central Campus administrative officer should oversee operation of the Westport and McGee Campuses and should help plan educational facilities at the new site.

c. A chief administrative officer should be appointed for each of the two suburban campuses when they are acquired. They should be immediately responsible for community relations and development of educational programs consistent with community needs and the District's purposes.

d. For development of the Central Campus, a coordinating committee should be organized with the assistance of a District planning and development administrator. The committee should include representatives from the college, the architectural firm employed for design and construction supervision, an agent of the college to handle site acquisition, and businesses with a vital concern in the nature of the site development, as well as a traffic engineering consultant and a representative of the Kansas City Planning and Traffic Department.

e. To coordinate district development and operation, a District Advisory Council should be created; it should consist of members of the faculty, the administration and the student body. The District Council should make recommendations on educational policies to the Board of Trustees. An administrative council should coordinate business matters and serve in an advisory capacity to the president.

f. The fully developed campuses should be given the capability of functioning autonomously within overall District policies.

g. Periodic evaluations of progress should be made by persons on the college staff who are expert in institutional research. Indeed, as soon as some basic decisions are made

(selection of a president, selection of sites, and action to relieve the present critical lack of space and facilities) a systems analysis approach to planning (Program Evaluation Review Technique–PERT, or similar scheme) should be adopted.

4. Program

a. The college should adopt a core curriculum scheme for most of its occupational programs. Under such a plan each associate degree curriculum would include general education, basic theory and supporting technical courses, and specialized occupational courses.

b. In general terms, we recommend the expansion of the occupational education program to emphasize preparation for the semi-professional, technical, and highly-skilled occupations, with particular attention to the following "clusters" or "families" of occupations:

Aviation
Business office, management, and sales
Engineering-technical and industrial-technical
Health and medical technician
Services (public and private sectors)

Such a policy will avoid unnecessary duplication of effort between MJC-KC and the Kansas City Public Schools' area vocational-technical school, which is now in the planning stage. The courses and programs offered at the latter facility should be, for the most part, at secondary levels, emphasizing training for occupations at skilled, semi-skilled, and service levels. Close articulation between the vocational school and the junior college should be maintained. In the event that the proposed Kansas City Vocational-technical school does not become operational MJC-KC should reevaluate its own responsibilities for vocational and trade level education during the 1970-71 college year.

c. The college parallel, liberal arts, and academic study programs should continue to receive full support for maintaining current levels of quality as the total college program is expanded to meet future needs. Stronger programs in the fine arts and performing arts, establishment of liaison committees to work with four-year colleges and universities, improvement of library holdings and new facilities should be given high priority to strengthen the academic program.

d. An extensive program of student personnel services should be developed to provide for expanded guidance, counseling, and testing programs and for job placement activities.

e. To develop and improve the college's community services, a series of ad hoc advisory committees should be established. A citizens advisory committee should be organized and should concern itself with broad issues of collegiate development at the request of the Board of Trustees. Special ad hoc, lay advisory committees are recommended for the development and monitoring of occupational education programs. In addition, several

professional advisory committees should be created to aid in the coordination of educational programs provided by different institutions and to promote better articulation between the junior college and other elements of the regional educational system.

f. A great deal of planning effort should go into the development of cooperative work-experience programs with industry, business, and with institutional and government agency employers.

II. ECONOMIC AND DEMOGRAPHIC PROFILE OF THE KANSAS CITY METROPOLITAN AREA

A. ECONOMIC GROWTH OF THE KANSAS CITY METROPOLITAN AREA

We have developed an overall analytical view of recent economic trends in the area, have tried to highlight the salient forces that have been shaping the economic structure of the area, and have made comprehensive projections of employment in all sectors of the area's economy to 1975.

In making these projections, we have devised an econometric model of the area's economic system premised on a set of statistically derived quantitative relationships that describe the fundamental economic forces affecting employment trends in particular sectors of the area's economy.

There is every reason to be optimistic about the economy of the Kansas City Metropolitan Area. Historically, greater Kansas City has enjoyed unique locational advantages which have contributed significantly to the area's emergence as an important distribution center and later to the growth of manufacturing activities oriented mostly to the economic needs of its large hinterland. More recently, the area has established itself as an important manufacturing center, first in producing non-durable goods and more recently in producing durable goods which are exported to the rest of the nation and to all parts of the world. Today, the area's strength as a manufacturing center outranks its traditional importance as a distribution center. Moreover, recent growth in the service industries and in government employment has created a definite structural shift in the area's economy. These structural shifts will continue within the context of a generally growing economy, in which the service industries, including government, are generally expected to grow at a faster rate than the manufacturing and wholesale and retail trade sectors.

In the final analysis, the Kansas City Metropolitan Area economy is extremely resilient and well balanced in terms of its possible vulnerability to federal defense cutbacks and other sudden exogenous shifts. Its growth is vigorous, and its future healthy.

B. MANPOWER REQUIREMENTS OF THE KANSAS CITY METROPOLITAN AREA ECONOMY: PROJECTIONS TO 1975

In determining the quantitative dimensions of the manpower needs of the Kansas City Metropolitan Area economy for the purpose of developing precise guidelines for vocational educational planning of the new community college system, we have taken a comprehensive "manpower requirements" approach. This approach is relatively new and is currently in a state of development due to the simultaneous efforts of many researchers. Our work represents a unique contribution to local manpower research, in terms of both its comprehensiveness and its utilization of most recent national information pertaining to technological developments and shifts in the detailed manpower requirements of industries.

The expanding economy of the Kansas City Metropolitan Area in the 1960's and early 1970's requires about 22,000 new employees every year just to keep pace with replacement and expansion requirements. Replacement requirements are estimated at an average of 11,946 employees a year, while expansion requirements are estimated to be 10,059 employees a year. These estimates reflect only *average* annual manpower requirements during the fifteen year period between 1960 and 1975; they do not represent predictions of new manpower requirements for *any* given year.

During the next eight years, or by 1975, the Kansas City Metropolitan Area economy is expected to gain 71,500 new jobs in nonagricultural industries, about half of which will be concentrated in government, services, and finance-insurance-real estate. Manufacturing employment is expected to grow by 14,900, while in the transportation-communication-utilities and the wholesale and retail trade group the expected employment growth will be 12,900. The construction sector itself is expected to generate about 7,300 new jobs during this period.

This anticipated growth in the area's economy parallels its successful growth pattern during the last eight comparable years. During this period, the area gained 86,100 new jobs in the nonagricultural industries, for a growth of 21.9% from the 1959 level. The anticipated growth in nonagricultural employment during the next eight years will be 14.9% over the 1967 level. Thus, the expected growth rate will be below the recent growth rate. In general, this reflects an anticipated overall national trend.

Average annual requirements for new manpower in different occupational groups will be quite different:

Occupational Group	Percent of Average Annual Manpower Requirements
Professional, technical, and kindred	18.1
Managers, officials, and proprietors	8.6
Clerical and kindred	26.3
Sales and advertising	7.4
Craftsmen, foremen, and kindred	11.2
Operatives and kindred	12.9
Service workers	14.1
Laborers	1.4

Our findings generally reflect the broad structural shifts now occurring in the occupational composition of employment. Fast growing groups, such as service workers, clerical and kindred workers, and professional-technical-kindred workers are also the ones that are increasing their relative share of the total employment. In 1960 these three groups accounted for 43.6% of the total employment. By 1975 their combined share is expected to reach 48.8%. Other occupational groups, meanwhile, are declining in their relative share of total employment, although in absolute terms they are all growing by 21-36% during this 15-year period. The only exception to this trend is the occupational

group labeled laborers, which is actually declining in absolute terms by 5% during this period, in addition to the decline in its share of the total employment from 5.3% in 1960 to 3.6% in 1975.

Recent growth in the service industries and in government employment (there are about 24,000 employees of the federal government in the Kansas City area) foreshadow a decade in which service industries, including government, will grow at a faster rate than the manufacturing and wholesale and retail trade sectors of the economy. Moreover, much of the manufacturing in the Kansas City area is of a type that requires sophisticated research and development activity and an emphasis on quality control.

These factors are of considerable significance for community college planning, since a large share of the jobs in research-and-development and in the service industries, including government and health services, and "middle manpower" jobs requiring the training best offered by a junior college.

C. POPULATION GROWTH DYNAMICS IN THE KANSAS CITY METROPOLITAN AREA

Our study is primarily an analytical interpretation of population growth patterns in the metropolitan area, rather than a purely descriptive survey of population growth trends and prospects. In our analysis we have attempted to pinpoint the major forces and processes that have shaped population growth in the metropolitan area.

Among the nation's metropolitan areas, the Kansas City Metropolitan Area ranked twenty-third in 1966. The six-county metropolitan area's population increased rapidly during the postwar period, from 720,039 in 1940 to 1,285,186 in 1967. Much of this growth was due to local natural increase; the net gain through net migration accounted for nearly 37% of the growth in the 1950's and only about 10% in the early 1960's. This growth process resulted in significant changes in the age composition of the metropolitan area population. The most noteworthy result was a 68.5% increase in the number of persons under 20 years of age and a 69.4% rise in the number of children ten years of age or younger.

In 1960, the population of the Metropolitan Junior College District – Kansas City accounted for 75.5% of the total population living in Clay, Platte, and Cass Counties in Missouri, and 51.2% of the total six-county metropolitan area population.

1. Patterns and Changes in Population Distribution

Since 1940, the four "outer" counties (Clay, Platte, Cass, and Johnson) have grown at a faster pace than the two "central" counties (Jackson and Wyandotte). As a result, the share of the two "central" counties in the total population of the area has declined from 86.5% in 1940 to 70.0% in 1967.

In the 1950's, over 70% of the growth in the "outer" counties was the result of in-migration both from the two "central" counties and from outside. In the

1960's in-migration from outside slowed down considerably, so that growth in the "outer" counties during this period largely reflects outward population shifts from Jackson and Wyandotte counties. It is clear that in the two "central" counties, especially Jackson County, there has been an important outward shift of the white population from the central city to suburban areas within the county. It is also clear that suburban areas have a higher proportion of the younger groups than the central city.

During the years ahead, the suburbanization process is expected to continue. On the one hand, Jackson County is expected to increase its population by anywhere from 42 to 84% and Wyandotte County by anywhere from 40% to 60%; on the other hand, Clay County is expected to double or triple its population, Cass County to double its population, and Platte County to triple or quadruple its present population. According to the projections of the City Planning Department of Kansas City, Mo., Johnson County's growth will be a modest 83%, but the Metropolitan Area Planning Commission projects that the county will have four times its present population by 1990.

2. Mobility of the Kansas City Metropolitan Area Population

The population of the metropolitan area reflects the well known recent national trends in geographic mobility. In 1960, for example, over half the population (five years old or older) reported that they were living somewhere else five years earlier, 22% were former central city residents, and 18% had come from outside the metropolitan area. Different areas within the metropolitan region showed different mobility patterns. Thus, over 62% of the people living in Clay and Cass Counties were living elsewhere in 1955, compared with 59% for Johnson County, 56% for Jackson County, 48% for Wyandotte County, and 54% for Platte County.

In-migrants to the area have come for the most part from non-metropolitan areas rather than other metropolitan areas. This tendency is particularly strong among both white and non-white in-migrants in the 15- to 24-year old age group. Out-migrants, on the other hand, generally proceed from the Kansas City to other metropolitan areas. This tendency is especially noticeable among out-migrants in the 25- to 54-year old age group, and it is more characteristic of non-white out-migrants than of white.

It is also important to note that the Kansas City Metropolitan Area is attracting proportionately more poorly educated non-whites than it is losing.

3. Non-White Population of the Kansas City Metropolitan Area

The non-white population of the metropolitan area has generally increased at a slightly faster rate than the metropolitan area population as a whole. During the 1950-1960 decade, this population increased from 88,541 to 119,048, or a 34.5% growth versus the overall metropolitan area growth rate of 28.7%. Much of this growth (73.5%) was due to the doubling of the non-white population under 20 years of age. During this period, the percentage of non-white population in the metropolitan area remained

practically constant (10.4% in 1950 and 10.9% in 1960). The distribution of the non-white population, however, underwent significant changes. In 1950, 64.4% of the non-white population was concentrated in Jackson County and 33.3% in Wyandotte County; by 1960, Jackson County's share had increased to 71.6% and Wyandotte County's share had declined to 26.2%. The greater relative concentration of the non-white population in Jackson County represented a greater concentration in Kansas City, Mo., which in 1960 included 70.6% of the metropolitan area's total non-white population.

In 1960, the number of non-white children under 10 years of age was substantially higher than the number of youngsters 10 to 19 years of age. The clear implication of this from an educational standpoint is that those who were under 10 years of age in 1960 will represent a far greater potential demand for higher educational facilities for their vocational and academic development in the years ahead than has been the case. Second, those who were 14 years old or younger in 1960 will be 20-34 years old by 1980, which implies that, everything else being equal, there will be almost twice as much non-white population in the 20-34 age group in 1980 than in 1960. As a result, natural increase among the non-white population during the latter part of the next decade will in all likelihood be significantly higher than observed during the last few years.

4. Educational Attainment in the Kansas City Metropolitan Area

The educational attainment of the area's adult population compares quite favorably with other metropolitan areas and with the national urban average up to high school education, but beyond that, it suffers by comparison. That is, the Kansas City Metropolitan Area adult population does not appear to have as high a mix of college educated persons as, for example, Dallas, Atlanta, Minneapolis-St. Paul, Denver, or Los Angeles. It does show, however, a better overall educational attainment profile than does St. Louis or Milwaukee. In the Kansas City Metropolitan Area, 15.4% of the adult population (25 years old or over) has completed the equivalent of a junior college education. With the development of a comprehensive community college system, this should increase substantially. In the Los Angeles and Denver metropolitan areas, which have well developed community college systems, 18.8% and 21.8% of the population, respectively, have the equivalent of a junior college education.

The white adult population of Jackson County seems to have a lower mix of well educated persons than does the metropolitan area as a whole. More significantly, the educational attainment of Jackson County's adult non-white population is disproportionately below that of the white population. While 50.1% of the whites have completed high school, only 31.5% of the non-whites have. Furthermore, while 14.9% of the whites have completed two years of college, only 7.8% of the non-whites have attained as much education. Finally, only 3.6% of the non-whites have completed four or more years of college, compared with 8.1% for the whites. Whether or not this very heavy attrition rate is taking its toll on today's non-white generation is not certain. It is not amiss to point out, however, that in general the educational attainment of Kansas City's white and non-white population can be significantly improved in the years ahead.

D. PROJECTIONS OF POPULATION INCREASE IN THE KANSAS CITY METROPOLITAN AREA

By 1990, the Kansas City Metropolitan Area is expected to have 2.5–2.9 million people, according to projections by the City Planning Department of Kansas City, Mo., and the Metropolitan Planning Commission—Kansas City Region. This will mean, roughly, a doubling of the present 1.3 million population living in the six-county area during the next 22-23 years. These projections appear reasonable in view of the fact that the area's population increased by about 79% since 1940.

According to the projections made by the City Planning Department of Kansas City, Mo., the four-county Missouri part of the metropolitan area will increase its population by 854,935 persons between 1967 and 1990, of which 68.5% (585,544) is expected to take place in Jackson County. In contrast with this, the Metropolitan Planning Commission projections indicate (according to the "low" projection series) that this growth will be 603,244 persons, and that 48.8% (294,374) will take place in Jackson County. According to the Commission's "high" projection series, the growth will be 811,244 persons, of which 53.3% (432,374) will take place in Jackson County. The growth expected to take place in Jackson County varies, then, between 294,374 to 585,544 persons. By the same token, the growth expected to take place in Platte, Clay, and Cass Counties varies between 269,391 to 378,870 persons.

III. ENROLLMENT DEMANDS FOR METROPOLITAN JUNIOR COLLEGE–KANSAS CITY

A. THE NATIONAL PICTURE

By 1970, American Colleges and Universities will have a degree-credit enrollment of 7.7 million students; by 1975, degree-credit enrollment will have increased to 9.5 million. Thus, by 1970 more than half of the 18 - to 21-year-olds in the United States will be enrolled in colleges and universities.

There are two basic reasons for this trend. One is the tendency of Americans to idealize a college education. The other is the steady decline in jobs suited to unskilled labor. In the 1970's, unskilled labor will account for only 5% of the total work force and professionals will account for 12%. The remaining 83% will be in jobs requiring some skill, but not necessarily a four-year college education.

In the 1970's and beyond, at least 50% of the work force will be in jobs that require some post-high school education and much of this educational requirement will be for occupational training. At present, more than 10 million people work in jobs that require such training, and the serious shortage of professionals in almost all fields indicates that demand for these occupationally trained workers will continue to increase.

Six kinds of occupational education are of concern to the community college:

1. Semi-professional and technical education
2. Business education
3. Health occupations education
4. Trade and industry education
5. Service occupations education
6. Agriculture education

In addition to university parallel, transfer or pre-professional courses, we can identify three distinct kinds or levels of *occupational education* in which a truly comprehensive community college should be involved:

(1) *Collegiate-technical* programs primarily for full-time regular day students. These programs lead to the associates degree, require students of considerable ability, and incorporate significant content in theoretical

courses and in general education. Graduates of these programs most often move into jobs at semi-professional and technician levels in many business, industrial, and health fields. The cognitive-to-manipulative ratio is relatively high.

(2) *Vocational education programs for business and industry.* These programs may be full time regular day associate degree curricula, but more often they are short-term (one year or less), highly specialized curricula intended for job training in specific industrial or business fields. Theoretical content and general education content are modest in scope. The jobs for which they prepare generally fall within "skilled" or "semi-skilled" classifications. The cognitive-to-manipulative ratio is quite low.

(3) *Evening and continuing education programs* for persons already employed or for persons seeking training or retraining in order to qualify for employment. Basic education, remedial courses, and courses for job upgrading may be included. These courses and programs do not ordinarily lead to a degree, and may not carry college credit.

We believe the vast majority of workers in these occupations will be educated and trained in two-year colleges. The decade of the 1970's will see the associate degree firmly established as the recognized educational base for semi-professional and technical jobs, just as the high school diploma is now looked upon as the minimum educational standard for entry into most skilled trades and crafts and service jobs.

In many states, by 1975, half of all high school graduates will be "going on to college" in two-year colleges, and perhaps half of all these will be in occupational programs. We believe this pattern of two-year college attendance will be approached in the Kansas City area by the late 1970's.

Much controversy exists over the value of general education in community college occupational education programs. Some persons feel that education in the common learnings should end, for all but an intellectual elite, with high school. Education and training for occupational competence, it is said, must be highly specialized and concentrated on the knowledge and skills specifically required by industry and business. Time spent on general education will hinder the development of real job competence, it is feared. We do not share this view.

In a democracy, the tone of living, the value system, the goals men seek, are set not by an intellectual elite, but by the mass of the people themselves. The community junior college is in the best possible position to engender an increased level of concern among so-called average citizens, for it is by nature and purpose designed to serve the rank and file of the people. Moreover, the mere concept of elites, including intellectual elites, is foreign to 20th Century American society. If there is a body of knowledge concerned with the humanities, sciences, and the arts which is "good" for "bright" students, then to some degree at least, this body of knowledge is also "good" for all students.

B. PROJECTED ENROLLMENT DEMANDS

The dynamic emergence of the junior college in the educational system of the United States is nowhere more evident than in the burgeoning enrollments currently being experienced in many sections of the country. Because the junior college is becoming a more vigorous element of the educational system, characteristics of enrollment which we are currently using as benchmarks today may significantly change in the years ahead.

In addition to the enrollment demand for the Metropolitan Junior College that will be created by the college's expanded educational program and the increasing competition for college space, there is a demand that will result from the existence of adequate facilities for higher education in the area. According to estimates made by the Kansas City Metropolitan Area Committee on Higher Education, 750 to 1000 additional students of college potential from each high school class in the Missouri portions of the area would attend college if facilities were readily available.

Assuming that a minimum of 750 additional students would have attended college in 1966 if a comprehensive MJC—KC were available, 64.5% (or an estimated 6,080) of the 9,430 high school graduates in the four-county area would have entered college as first-time freshmen. In actuality, 56.6% (or 5,333) of all high school graduates entered college in the Fall of 1966.

We also estimate that a comprehensive MJC—KC system would have attracted 39.4% of all first-time freshmen from the four-county area in 1966. In point of fact, MJC—KC attracted 1,599 high school graduates in 1966, or 29.9% of first-time freshman from the area.

In 1978-79, the four-county area will have approximately 2,800 more high school graduates than at present. We estimate that, by 1979-80, 40% of all high school graduates will be attracted to MJC--KC and that the college's share of all first-time freshmen from the area will reach 50%.

Had one or more community colleges existed on the Kansas side of the Metropolitan Area, and had there been a comprehensive MJC-KC, about 50% of the first-time freshman enrollment at MJC-KC in 1966 would have come from outside the four-county area. We have assumed that this in-migration factor will remain fairly constant during the projection period, based on the thinking that a fully developed MJC-KC will by-and-large serve the Missouri portion of the Kansas City Metropolitan Area, and that the growth of educational opportunities elsewhere in the state will keep in-migration of students from outside the four-county area to at a very low level.

We have assumed that by the end of the projection period (1979-80), the ratio of full-time unclassified enrollment to total full-time freshmen and sophomore enrollment will be an estimated 12% compared with the more recent ratio of 5%. Also, we have assumed that by 1979-80, the ratio of part-time students full-time students will be about 2:5, which is almost twice the recently experienced ratio of 1:34. Both of these assumptions, based on experiences elsewhere in the country, reflect very strongly our anticipation that vocational, adult education, and regular academic programs will continue to increase.

We estimate that by the academic year 1979 - 1980, full-time equivalent enrollment at a comprehensive MJC-KC will reach about 16,000, which is four times the full-time equivalent enrollment in the Fall of 1967. Total head-count enrollment is expected to reach nearly 27,000 by 1979-1980, of which slightly over 19,000 will be part-time students and about 7,700 full-time students. The projected increase in part-time enrollment from the present 3,720 to about 19,000 represents the anticipation that a comprehensive and fully developed MJC-KC will become an important and vital force in the community's educational life, offering academic and occupational educational opportunities to the area's residents who will increasingly seek such opportunities. Table 1 summarizes our enrollment projections.

TABLE 1
SUMMARY OF ENROLLMENT PROJECTIONS FOR MJC-KC – 1969-1980

COLLEGE YEAR ENDING	FULL-TIME STUDENTS	PART-TIME STUDENTS	TOTAL HEAD COUNT ENROLLMENT	FTE ENROLLMENT	FTE DAY ENROLLMENT
1969	3,341	4,925	8,266	5,260	3,928
1970	3,617	5,591	9,208	5,814	4,321
1971	3,975	6,443	10,418	6,530	4,832
1972	4,459	7,579	12,038	7,492	5,523
1973	4,720	8,412	13,132	8,112	5,967
1974	5,083	9,498	14,581	8,962	6,571
1975	5,642	11,054	16,696	10,204	7,471
1976	6,003	12,333	18,336	11,151	8,159
1977	6,486	13,972	20,458	12,386	9,065
1978	6,945	15,687	22,632	13,650	10,003
1979	7,413	17,558	24,971	15,014	11,028
1980	7,673	19,183	26,856	16,092	11,851

NOTE: Projections have been rounded to the nearest multiple of 10. They represent *demand* for space and programs if a fully comprehensive system were readily developed and space available. They should serve as target figures for planning, recognizing that the enrollment projections are overstated for current programs and facilities.

Source: Arthur D. Little, Inc., projections.

IV. THE EDUCATIONAL PROGRAM

A. BASIC PRINCIPLES FOR SUCCESS

If the programs of a community junior college are to be developed and operated successfully, the college must adhere to certain basic principles. First, it should adopt an open-door philosophy for admitting students to the college. Although admissions to specific curricula or courses should be limited to those students who have a chance of completing the specific curriculum or course successfully, the college must be prepared to offer developmental or remedial courses for those not ready to enter regular courses or curricula. It must also make available a wide range of courses and curricula to meet the differing abilities and objectives of the students. For example, there should be several levels of English, mathematics, physics and social studies courses. There should be one curriculum for engineering technicians and another for industrial technicians, one curriculum for secretaries and another for clerk-typists, etc.

Second, the occupational program content should contain three kinds of courses: general education, basic theory and supporting technical, and specialized occupational courses. The general education courses – English, history, political science, etc. – serve to educate the student as opposed to training him for a job. The basic theory courses are essential to an in-depth understanding of the specialized occupational courses. The specialized courses emphasize the manipulative skills (use of tools and equipment) essential for actual job competence.

Third, the curricula, in general, should be planned around a cluster of occupations that have a common theoretical core. This core curriculum approach should be used at least for the freshman year. New curricula, for the most part, should be developed from new courses, not from courses already in the catalogue.

Fourth, a quality guidance program should provide some degree of directive counseling. Excessive permissiveness in educational guidance can lead to confusion in the program and frustration in the student.

Finally, the college must establish and work with advisory committees from business and industry to ensure that the occupational education programs are realistic and of high quality.

B. IMPROVING THE COLLEGE-PARALLEL PROGRAMS

The college-parallel programs at MJC-KC are of uniformly good quality, and some are excellent. Nevertheless, improvements are possible and desirable. Some of these improvements must await the acquisition of one or more campuses, but others require primarily only leadership and faculty involvement.

We see a need for improvement in eight general areas:

1 *Fine Arts and Performing Arts:* These programs should be strengthened and projected into the community itself.

2 *Liaison:* The college should establish committees to work with the nearby four-year colleges in order to maintain articulation for the college-parallel program.

3 *Library:* Library holdings and services must be improved. Furthermore, the library should be considered as resource for instruction not just a resource for books.

4 *Science and Engineering:* Laboratories and facilities should be adequate for college level instruction.

5 *Courses:* The faculty and staff should develop a more adequate philosophy of general education and implement it with courses specifically designed for the broad general education of youth.

6 *Guidance:* Student personnel services should receive much more attention.

7 *Physical and Health Education:* These are below standard and should receive first priority attention.

8 *Developmental Education:* Initiate a pre-academic type program to salvage the potential transfer student and develop diagnostic methods to differentiate between those students who can be salvaged and those who are not capable of successfully completing a college parallel program.

C. IMPROVING THE OCCUPATIONAL EDUCATION PROGRAM

Our suggestions are based on the research findings of our study of the economy and manpower requirements of the Kansas City Metropolitan Area and on a series of in-depth interviews with employers from 26 corporations, businesses, institutions and agencies. These interviews gave us detailed information about jobs, job classifications, manpower requirements, and potential shifts in industrial employment. They also provided substantial information that could be applied to the development of realistic curricula. Finally, they acquainted key management people with the college's plans.

From these interviews, we identified the following occupational education programs as the ones that will best fill the manpower needs of Greater Kansas City. Some of the programs are in operation now; the others should be phased in as facilities become available.

Needed Occupational Educational Programs: Projections to 1975

1. Business Occupations Group

Accounting

Business management
Options: Merchandising
Banking and finance
Small business

Business data programming
Options: Technician
Machine operator
Key punch

Sales and advertising
Options: Commercial art
Fashion design
Copy-writer
Sales representative

Secretarial
Options: Executive secretary
Legal secretary
Technical secretary
Stenographer
Clerk-typist

2. Health Occupations Group

Dental office assisting

Inhalation therapy

Medical office assisting

Medical electronics technician (EKG, etc.)

Medical lab technician (ASMT)

Medical records secretary

Nursing
Options: Associate degree (emphasis)
Diploma (Co-op with hospitals, phase out gradually)

Operating room technician (sometimes called "surgical technician")

Unit management (nursing station)

X-ray technology

3. Industry/Engineering/Science Occupations Group

Air conditioning/refrig. technician

Aviation industry occupations
Options: A and P mechanic
Aircraft pilot
Air traffic controller
Counter and ramp personnel

Chemical technology

Drafting and design technology
Options: Architectural drafting
Mechanical design

Engineering technology
Options: Civil
Electrical/electronic
Mechanical
Engr. lab (general)

Industrial supervision

Instrumentation technology

Operating engineering technology

Sanitation technology

4. Service Occupations Groups

Community recreation specialist trainging

Educational (new media) technology

Hotel and restaurant management

Fire service training

Law enforcement

Social worker aide training

Teacher aid training

5. Agriculture Occupations Groups

Agri-business

Agricultural technology

Based on the experience of other community colleges in metropolitan areas similar in many ways to Kansas City, enrollments in the five major occupational education fields might be distributed as follows, assuming about half the full-time-equivalent day enrollment pursues occupational programs:

Major Program Category	Estimated 1975 Distribution	
	Percent	Number
Agriculture (if offered)	2	75
Business	25	920
Health	20	740
Industry/Engr./Science	35	1300
Service	8	295
Other Occupational	10	370
Total	100%	3700

The Industry/Engineering/Science group of students can be divided into two approximately equal sub-groups.

(a) Those capable of collegiate-technical, semi-professional, associate-degree programs (about 650 students).

(b) Those whose abilities predict success only in highly-skilled or industrial-level programs (about 650 students).

The other groups might have some curricula at the associate degree, semi-professional level and other courses and sequences at less demanding levels, in order to give students of lower academic abilities a junior college program which would prepare them for available jobs.

It is readily apparent that, by 1975, the numbers of students attending MJC-KC will necessitate a great deal of curriculum expansion in occupational education. However, even with the numbers of students indicated in the above table, extreme proliferation of curricula and courses is to be avoided. Keeping in mind that each separate curriculum involves anywhere from two to six courses unique to its own occupational field, the necessity for careful planning is apparent.

It would be advisable to place a good share of the core requirements in the freshman year. This procedure would result in the following advantages:

(a) Relatively large freshman classes would help balance necessarily small sophomore classes in some specialties.

(b) Core requirements could be offered at *all the campuses*, assuring that all sophomores in any curriculum would then have the same background of freshman preparation. Transfer to any campus in the system for sophomore work would thus be facilitated.

(c) Very expensive programs, and/or those with inherently low sophomore enrollments, could have the advanced laboratories and courses located at only one campus in the system.

D. STUDENT PERSONNEL SERVICES

Certain steps should be taken immediately toward upgrading the student personnel services in the Metropolitan Junior College District. The following recommendations pertain especially to the immediate future – even while the new Central Campus is in the planning process – although some of them obviously are applicable to each new campus as it comes into being.

1. A written statement should set forth the philosophical assumptions which provide the rationale for a student personnel program in a community junior college. This statement should be a result of joint discussions among representatives of the faculty, the students, the administrative staff and the student personnel staff and should define in behavioral terms the goals and objectives of the student personnel program at Metropolitan Junior College.

2. Policies and procedures for the student personnel services area should be developed which will minimize the division of the college program between the Westport and McGee buildings. The present arrangement is impractical and unnecessarily fragments the services provided to both students and faculty. As long as the division between the two buildings exists, some method should be established for developing cooperative working arrangements in order to provide unified and consistent student personnel services to all students.

3. Job descriptions should be prepared for each position in the student personnel area which clearly delineate its responsibilities and duties, as well as clarify its relationship to other student personnel and instructional areas.

4. The functions of the admissions office should be defined as belonging to the student personnel area and the lines of responsibility clarified. The present arrangement in which the director of admissions is functionally responsible to the assistant deans and administratively responsible to the vice-president contributes to an ambiguous situation. The work of the admissions and records office needs to be coordinated more closely with the counseling function in order to improve the quality of service to students. For example, the work of the counselors in the McGee building is adversely affected because of the difficulty in obtaining students' files and records from the Westport building, where they are stored.

5. The system of faculty advisement needs to be carefully evaluated. If it is to be continued, an extensive and intensive in-service training program for faculty needs to be developed and implemented.

6. The use of standardized tests needs intensive study. The method of establishing criteria for academic placement needs to be reviewed and safeguards established against arbitrary and inappropriate use of test scores. The responsibility for the development of pertinent test data should rest with the student personnel area with the assistance of the research and instructional staffs where appropriate. Interpretation of test data and the use of it in student decision-making should be directed by professional counselors who are competent to relate test scores to other pertinent data about students.

7. The financial aids program needs to be expanded. It is significant to note that in a student body of more than 5,700 students, only 1 to 5% are receiving financial assistance through scholarships or loan funds.

8. The job placement service should be upgraded. There is no regular part-time or full-time placement service available to students and only minimal efforts are made to provide even sporadic service to students or employers. If the college is to serve the lower socio-economic segments of Kansas City's population, services in this area will need to be developed. There was not enough opportunity during the visit to obtain sufficient information about the developmental program to make an accurate judgment as to how effectively it is meeting student needs. However, there is some evidence to suggest that the program would benefit from greater involvement of the counseling staff in the selection of students and in planning and implementation. There was general agreement among the staff that more curricular offerings for students with limited academic ability were needed.

9. The counselor-counselee ratio should be reviewed and brought into line with acceptable professional standards. Although use of all faculty members as academic advisers may alleviate the pressure on the counselor's time, it also diminishes the opportunities for counselors to have direct and frequent contact with each student. As a result, counseling services become primarily concerned with clinical problems involving the "problem student," at the expense of the customary emphasis of junior colleges on providing counseling services to *all* students.

10. There is general need for the development of a broad, comprehensive program of evaluation of the student personnel program. This should be accompanied by intensive and extensive collection of data regarding students, including follow-up studies of graduates as well as of those who leave prior to the completion of any meaningful objective.

11. The student personnel program needs strong, centralized leadership to provide coordinated guidance and direction to the various service areas and to establish a purposeful relationship between the instructional program and the student personnel program. The administrative organization structure needs to provide a position for a chief student personnel administrator who can provide essential leadership to the student personnel staff and to the development of their programs.

12. It is essential that a dean (or comparable title) of student personnel services be appointed for each campus and that he coordinate with the dean of instruction. It is not necessary that one person in the district office be charged with overall coordination responsibilities for student personnel, but there must be district-wide concern about this phase of the program. The District President should take whatever steps he considers necessary to achieve this.

13. There should be an appropriate delegation of responsibility under the dean of student personnel for other functions such as the student activity program, coordination of counseling and guidance, admissions and records, etc. Obviously, the rapidity with which a complete organization is effected depends upon the size and growth of each campus.

V. LOCATION, SITE SELECTION AND FACILITY NEEDS

The most pressing issue that confronts the Board of Trustees and the citizens of the Junior College District is the location and development of campuses that will most effectively meet the comprehensive community college education needs of the region. This issue is at the heart of many other problems associated with a developing institution. For example, the success with which the Metropolitan Junior College implements the educational program will be related in part to the institution's location and facilities, because location and the character of buildings and landscape will affect how and by whom the college is used. The decisions that are made regarding the site selection and the quality and amount of space required for different functions will influence the Junior College and its students for many years to come.

We addressed this problem by examining a number of alternative locational schemes. Through an extensive interview and research program, we sought to develop an understanding of the region's educational needs that would be sensitive to the number of campuses required in the Junior College system and to their location. We examined location alternatives and identified and evaluated a number of possible sites. We have concluded, as did the district voters, that a multi-campus system would be most responsive to the educational, cultural and economic needs of the Kansas City metropolitan area.

In this section, we present our reasons for this conclusion and suggest the specific steps required to make the system fully responsive. In addition, facility needs and development costs are examined as they relate to individual development packages.

A. CONSIDERATIONS AFFECTING LOCATION

We distinguish between "location" and "site." For purposes of this study, a "location" refers to a general vicinity that has identifiable characteristics as a place. A "site," on the other hand, refers to a more specific piece of real estate, although, for purposes of examining development alternatives, it can be a variable quantity with shifting bounderies, depending upon the nature and timing of possible future uses of the site. We make this distinction because we believe it is important first of all to focus on suitable locations before attempting to identify and procure sites.

The location choices of a community college should be made first on an evaluation of how the institution can best meet the needs of the community. The education programs offered by the college, the total cost of education to the student, and the location of the college, all have effects on the number of people who will seek broader horizons through the "open door." For purposes of this project we classified these considerations as "need-service" factors, and they include such things as: serviceability in terms of a student's place of residence; the physical relationship between a college location and places of employment; regional image; optimum enrollment levels; availability of public transportation; community service opportunities; and cultural diversity.

Another consideration affecting location choice—the costs of education— is of immediate concern and measurable. It is important, however, that the costs of education be viewed in the context of the total costs of higher education borne by both the public and the student. When one considers commuting costs, the purchase of materials and supplies, and a student's loss of earnings, per capita costs for capital outlay and operating expenses typically constitute less than half the total expenditure. Yet, the return to the taxpayer on his investment in community college education can be substantial. One investigator recently concluded, for example, that over a 45-year period the return on an investment of $1500 for one student at a community college could be over $280,000.

Although not all of the direct costs and benefits related to location can be efficiently measured, there are cost considerations which must be weighed. For example, economies gained from scale operations need to be viewed against possible losses associated with large, and oftentimes, insensitive institutions. Expansion needs are important in terms of additional costs that may be imposed when the existing institution grows beyond the vision or predictability of current plans. Similarly, there are costs associated with organization and administrative procedures that may be directly connected with the number of campuses to be developed and the organizational framework for their administration. Finally, there are variable costs of construction and operation associated with location. These must be weighed against the entire range of considerations affecting the location. Perceived high costs now associated with a particular scheme of development may in fact save substantial funds in the future.

Where possible, we have attempted to quantify and measure the diverse location considerations. In some cases, however, where quantification is not feasible, we had to rely on our intuitive judgment gained from experience in similar situations and from numerous interviews with persons concerned with and knowledgeable about conditions in metropolitan Kansas City.

B. LOCATION ALTERNATIVES

Although the voters of the Junior College District authorized the sale of bonds for the purchase of three sites and construction of facilities on one site, we were asked to evaluate the range of location alternatives that might be applicable to the metropolitan region. Essentially, we identified five approaches to this question.

1. A single campus could be constructed to serve the entire district.

2. Two campuses could be developed with overlapping, yet differentiated service areas.

3. A three-campus system, such as the voters approved, could be established with similarly differentiated service areas and overlapping responsibilities and functions.

4. The College District could develop as a multi-centered operation without a single dominant campus; this approach argues for the establishment of five, six, or more small centers strategically located throughout the district to serve highly differentiated needs.

5. A modified multi-centered approach could be combined with any of the first three alternatives to develop yet a different pattern of service to the community.

A single campus serving the entire region poses singular problems for the planner, and subsequently, for the educator. Such an operation would have to be located on a large site capable of accommodating growth for many years to come. The physical development of a single campus would pose difficult problems of disjointed and eventually costly expansion. The alternative would be to impose considerable constraints on the planner's ability to create a coherent environment for the community college matriculation process where cohesiveness and informality are prized. In addition, for a college district with the configuration and population size of Metropolitan Kansas City, it is difficult to suitably locate for convenient service to a great variety of users.

Consequently, two- and three-campus systems can more readily serve diverse population groups and a greater variety of community interests. A multi-campus system requires that the region's diverse characteristics be carefully evaluated to adequately identify differentiated service areas.

The multi-centered system is particularly difficult for many people to grasp, because it does not necessarily establish a specific identity or sense of place. Although this system could provide many unique opportunities for innovation in higher education, it may be particularly ill-suited as a vehicle for the expansion of an established junior college organization. In combination with other approaches, however, and on a modified scale, the multi-centered approach could offer many services to parts of the community that have not traditionally been well-served by the educational establishment.

As one method of evaluation, we constructed probability matrices for each of the primary location alternatives. Considering such things as typical urban car ownership patterns, commuting patterns, trends in residential development, and centers of employment, we assigned a probability rating of from 0 to 1 to the likelihood that a particular campus scheme would have a high, medium, or low attraction for the potential enrollment demand generated by the north and south suburban areas and the central city. Although a highly subjective process, it provides an index of how well a particular scheme may serve residents of the district. We found, for example, that a south suburban campus of a single-campus system would have a very low probability of attracting large numbers of potential enrollees from all sectors of the district. Not unexpectedly, a *three-campus system would have the highest overall probability of attracting the greatest number of potential students, and may very well raise regional participation levels in higher education substantially.*

To determine the most appropriate configuration a three-campus system should have, we examined highway and commuting patterns and travel-time differences from different points within the district. It is widely held that a 15-20 minute commuting time is the optimum for the majority of people. Using this standard, we constructed isolines of time-travel from different points. They are based on average running speeds for different types of roadways and thus take into account such things as traffic congestion and high-speed arterials. The most reasonable configuration for a three-campus system suggested a location in the core area of the central city and other locations in the north and south portions of the district.

We hypothesized that the most appropriate location configuration for the district would in fact include a campus in or near the downtown of Kansas City. To test this hypothesis, we examined the probable distribution of enrollment that would result if the majority of prospective students would choose a location closest to their place of residence or place of work. Table 2 shows the results of this examination. By the academic year 1979-1980, we would expect that a campus situated in the inner core of the metropolitan region would attract approximately 43% of the total day full-time equivalent enrollment. The north campus would have about 21%, and the south campus, 36%. The proportional differences in headcount enrollment would be even greater, since more part-time students would be attending the central campus because of its proximity to large concentrations of employment and two densely developed residential communities.

In addition to the above approaches to the evaluation of location alternatives, interviews with employers to determine the types of community college occupational education programs most in demand led to further corroboration of the three-campus system with an urban core and two suburban locations. Although we envision that each campus would offer a full and comprehensive program, our interviews suggested some differentiation among occupational curricula. The following describes the appropriate distinctions suggested by our research:

Central City Campus

- Very strong in all business education fields. Perhaps the only campus offering specialized work in merchandising; banking and finance; computer programming; commercial art; fashion design; and advertising.

- Very strong in most of the health occupations. Perhaps the only campus offering specialized work in inhalation therapy; medical electronics technology; medical lab technology; operating room technology; unit management; X-ray technology; and dental office assisting.

- Quite strong in the Industry/Engineering/Science occupational fields, except those indicated as areas of concentration at other campuses. Perhaps the only campus to offer specialized work in air conditioning/refrig. technology; industrial supervision; operating engineering technology; and graphic arts.

TABLE 2
DISTRIBUTION OF MJC-KC ENROLLMENT PROJECTIONS
1969-70 AND 1979-80

Parts of MJC-KC District	Enrollment				Percent Breakdown of Enrollment				Ratio of Part-Time to Full-Time Enrollment	
	Headcount		Day FTE		Headcount		Day FTE			
	1969-70	1979-80	1969-70	1979-80	1969-70	1979-80	1969-70	1979-80	1969-70	1979-80
NORTH	1,468	5,156	851	2,497	15.9	19.2	19.7	21.1	0.9	1.9
CENTRAL	5,946	13,750	2,267	5,146	64.6	51.2	52.5	43.4	2.4	4.0
SOUTH	1,794	7,950	1,203	4,208	19.5	29.6	27.8	35.5	0.6	1.5
TOTAL	*9,208*	*26,856*	*4,321*	*11,851*	*100.0*	*100.0*	*100.0*	*100.0*	*1.5*	*2.5*

Source: Arthur D. Little, Inc.

- Very strong in the service occupational fields. Perhaps the only campus offering specialized work in hotel and restaurant management; fire service training; law enforcement; and social worker aide training.

- Offers the core freshman programs for nearly all fields.

South Campus

- Strong in all business fields except those where concentration at the City Center Campus was indicated.

- Strong in most health occupations – nursing especially. Some of the highly specialized programs may be at Central City Campus only.

- Very strong in Industry/Engineering/Science occupations. Perhaps the only campus to offer advanced specialized work in chemical technology; civil technology; sanitation technology; very advanced work in industrial electronics and communications electronics; and mechanical technology.

- Offers the core freshman programs for nearly all fields.

North Campus

- Concentration on the aviation industry occupations. Perhaps the only campus to offer specialized work for A & P mechanics; air traffic control; counter and ramp occupations; and pilot training.

- Agriculture programs might be concentrated here, at least all the sophomore specialty courses.

- Offers the core freshman programs for nearly all fields.

C. SITE SELECTION AND EVALUATION

On the basis of our evaluation of the location alternatives, we concentrated on the site identification and evaluation process in the three sectors of the Junior College District noted above.

Selecting a suitable site for a community college in the central city requires very special consideration of problems not associated with suburban locations. First, land is scarce and costly. Traffic circulation problems are particularly acute, and traffic congestion is a prevalent condition. In addition, there are substantial problems associated with the development of a unique college identity and image that will be unique unto itself and positively affected by its immediate environment. These constraints severely limit the number of sites that would be suitable for college development.

Based on our interviews and our physical reconnaissance of the center city area, we concluded that a central city site would have to be located in an area that had significant regional identity. The site should be in a location familiar to all residents as a place frequented by persons from throughout the Junior College District with diverse interests and pursuits. Essentially, this restricted our site search in the central city to the Downtown Loop and an area several blocks south of the Loop which we have identified as the Crescent. The Crescent, along with sites we evaluated throughout the region, are shown on Figure I.

The Downtown Loop certainly has the highest regional identity quotient of any area in the district. Because of this, and because of the highway network converging on the downtown and the very substantial employment concentrated there, the Downtown Loop has many important advantages for a central city junior college site. Its disadvantages are also significant, however. Land is more costly in the Loop than in any other place in the region and the downtown area is also the most congested. In addition, available land in sufficient quantity to adequately house the central city operations of the Junior College is limited primarily to small parcels. The necessity for high-rise construction, while not intrinsically disadvantageous for college purposes, would in our estimation impose disproportionate costs on the district relative to other alternatives in the near vicinity.

The area immediately surrounding the Downtown Loop also offers possible sites for development. In general, we found these sites to be inferior to others. The Loop highway network presents a serious barrier to effective interaction among abutting properties. There is noticeable deterioration in the quality of the area in terms of its regional image characteristics; and the sites in this vicinity do not have any significant advantages in terms of transportation accessibility, land costs, or ease of development.

We have designated the area found to hold the most promise for a central city Junior College site as the Crescent. It can be roughly identified as the area running from 31st Street and the Southwest Trafficway north and east to encompass Penn Valley Park, the Trinity Lutheran–St. Mary's Hospital complex, the Crown Center development and the Hospital Hill Urban Renewal Area. It is an area of great natural beauty that is undergoing the most dramatic transformation of any district within the central city. The public and private investments in new office buildings, institutional redevelopment and in new residential and cultural facilities offers assurance of future benefits that will accrue not only to its immediate environs but to the entire metropolitan region. We believe it has one of the most significant image quotients to be found in the region.

In the course of our site search and evaluation studies, we contacted many organizations and individuals with an identifiable interest in the future of the Crescent. In the course of this investigation, several site possibilities were revealed. They range in size from 20-50 acres and generally encompass the Crescent area. With the exception of income producing properties, land values typically range between $3-5 per square foot with exceptions on either side of this range. By comparison, the high value is about half the cost of unimproved land within the Downtown loop.

For all of the sites within or immediately adjacent to the Crescent, only one site stands out that holds our unqualified endorsement for the central city campus. This is

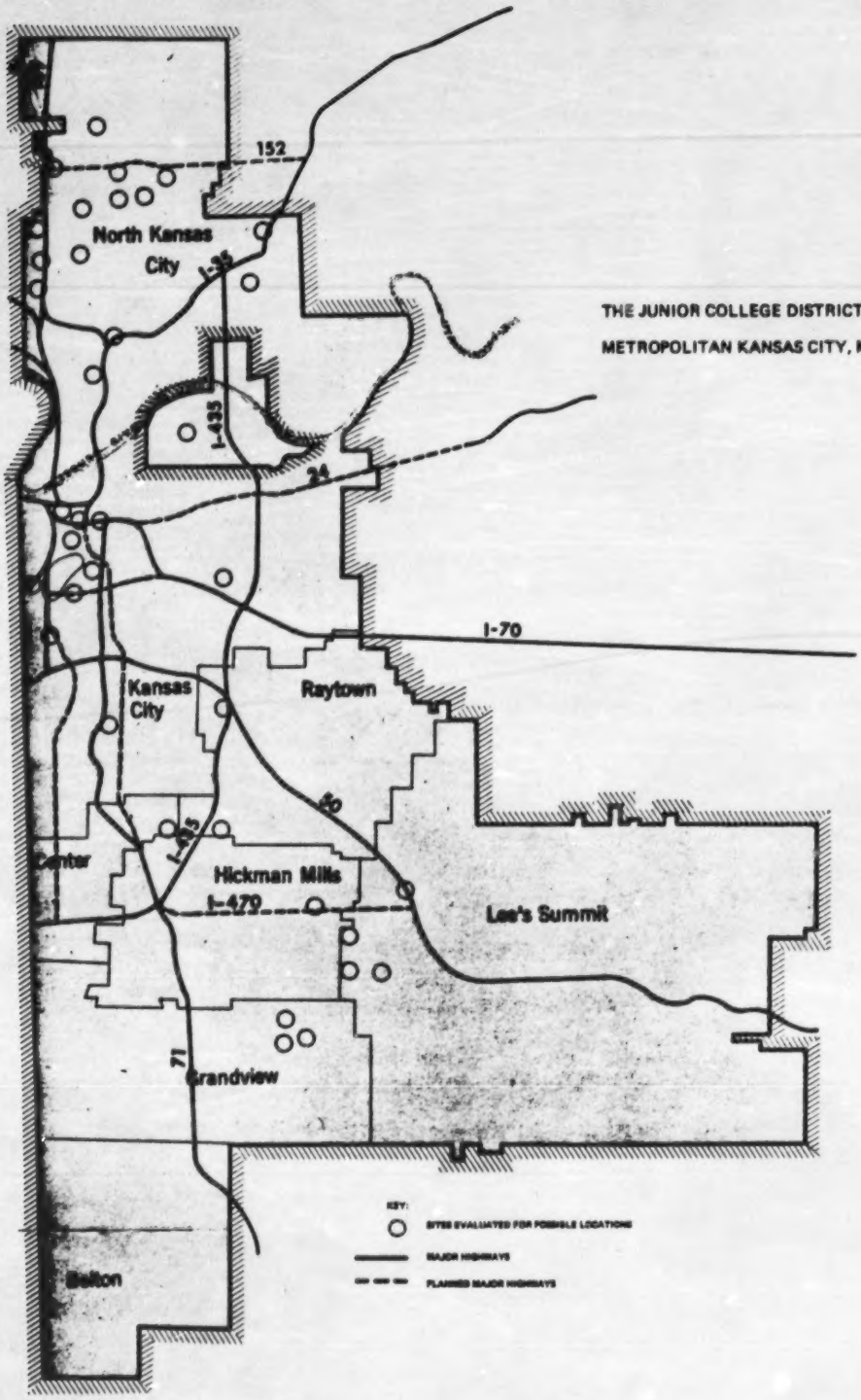

FIGURE I GENERAL LOCATION OF POTENTIAL SITES FOR MJC CAMPUSES

an approximately 30-acre site bounded on the north by 31st Street and Penn Valley Park, on the south by 33rd Street, the Southwest Trafficway on the west and Broadway on the east.

We have identified this as the *31st Street site*, and we strongly recommend that the Board of Trustees initiate planning, acquisition and development of the site for the central city campus. This site's particular advantages include a commanding view of the metropolitan region; immediate proximity to Penn Valley Park as open space relief normally not available for a center city campus; good transportation accessibility characteristics in terms of the current network of streets and also in terms of future plans for highway improvement; good topographical features for building purposes; and ready accessibility to the large central city employment market. With the exception of this latter advantage, no other site in or around the Crescent area offers these advantages. Relative to other sites in the central city, the 31st Street site does not have any disadvantages. The primary problem associated with its development will be the handling of traffic circulation and parking. However, these are problems attendant to all central city sites, and we believe through careful planning such problems can be effectively controlled and resolved to the point even of alleviating some of the existing congestion problems.

Other areas investigated in the immediate proximity of the Crescent include sites adjacent to the Hospital Hill Urban Renewal Area, a 46-acre site north of 31st Street and adjacent to Union Cemetery, and areas east of the Southwest Trafficway and in the vicinity of Union Station. The latter areas we judged undesirable because of barriers created by topography, highways, and marshalling yards to the mainstream of activity associated with the Crescent. Development of air rights in the vicinity of Union Station was considered, but discarded because of the high cost of development without any particularly noteworthy advantages. Development in the vicinity of Hospital Hill offers some advantages with respect to the development of programs in the health and allied fields, but we believe the Junior College would suffer a difficult image problem unless contiguous development could be assured. As far as urban renewal is concerned, the possibilities of participating in such a program at this time are remote. Although significant advantages can be obtained with reduced land cost, urban renewal funding at the present time is extremely limited, and it is likely that the Junior College would face a lengthy period of development.

The site north of 31st Street and adjacent to Union Cemetery has very difficult topographical features which could restrict the full utilization of the 46 acres. The amount of relatively level ground is approximately 27 acres and has a difficult parcel configuration for planning and design purposes. Although the per square foot cost of this land is reported to be lower than the recommended 31st Street site costs, the Junior College would have to buy a larger parcel than would actually be required, or perhaps could be effectively used, to protect the integrity of the site. This would bring the total land cost close to the total estimated for the 31st Street site.

All of the possible sites in the vicinity of the Crescent suffer by comparison with the recommended 31st Street site. One of the most noticeable features of this site is its proximity to Penn Valley Park, which is an amenity seldom found for institutional development in congested central cities. No other site offers open space protection for all adjacent land uses for years to come. In addition, other sites in the vicinity of the Crescent do not enjoy the same network of transportation routes bearing on the 31st Street site. The Southwest

Trafficway, Broadway, 31st Street and Linwood, offer unique opportunities for effective planning of ingress and egress to the Junior College located at the 31st Street site. Transportation planners located in Kansas City view this as a significant asset. Although the problem of congestion is very real, the college will have to confront this issue at any location in the central city.

Table 3 shows estimated acreage and land costs for the recommended 31st Street site. Approximately 24 acres of the site is held in private ownership and there are about 6 acres in paved streets and right-of-ways. The overall average land costs, including improvements, for the northern portion of the site is estimated to be approximately $5 per square foot. The southern portion is estimated to have an average cost of approximately $4 per square foot. These estimates are based on our understanding of recent sales in this area. The actual fair market value, of course, would have to be established after independent appraisals were undertaken based on recent purchases on the open market.

TABLE 3
ACREAGE AND LAND COSTS FOR RECOMMENDED CENTRAL SITE

1.	North Portion: 10.77 acres in private ownership		
	2.33 acres in public streets and right-of-ways		
	Average land cost (including improvements): $5.00/sq. ft.		
	Cost of land		$2,345,700
	Demolition and Clearance (5.88% of land and improvements)		137,900
2.	South Portion: 13.53 acres in private ownership		
	4.02 acres in public streets and right-of-ways		
	Average land cost (including improvements): $4.00/sq. ft.		
	Cost of land		2,357,500
	Demolition and Clearance		138,600
	TOTAL Acreage	30.65	
	TOTAL Land Cost, Cleared		$4,979,700

Subsequent to our oral report to the Board of Trustees in February, at which time we presented our recommendations, we learned that the Broadway Area Association had developed plans for redeveloping an area which incorporated the recommended 31st Street site. The Association is concerned that the 31st Street site developed for the Junior College conflicts with their current plans. We have reviewed their plans, and although an apparent conflict does exist, we believe a resolution of the problem could be obtained through effective planning and cooperation that would be beneficial to both the Junior College and the Association's plan. In fact, we believe the college development can act as a catalyst for the Broadway Area Association's redevelopment plan. The college will provide a focal point for more effective traffic and transportation planning and will aid in raising land values for future investment purposes.

As noted earlier, Figure I shows available sites identified in the northern and southern portions of the Junior College District. There are a sufficient number of available sites in both areas that we believe the college will be in an advantageous position to acquire a suitable site. Land values generally range around $2,500 per acre in the North Kansas City district and around $3,000 per acre in the southeastern portion of the district. We believe the college should initiate proceedings for acquisition of a suitable site in both areas immediately.

In the North Kansas City district, we suggest the site be reasonably close to Barry Road (Highway 152). This area is expected to undergo substantial development in the next few years, and the east-west access will become a significant arterial for future development. We believe a site anywhere along Barry Road would be suitable, although proximity to Highway 169 might be preferable for the nor-south access and for the proximity to the Kansas City Mid-Continent International Airport. In addition, the Barry Road access may provide an important link with adjacent school districts in the advent of their desire to join the Junior College District.

In the southeast, we believe a site should be reasonably close to the proposed freeway (Interstate 470) linking Interstate 435 with Highway 50. This would place the College in an excellent accessibility position with respect to population growth centers of Hickman Mills, Lee's Summit, Raytown and Grandview.

Figure 2 shows the locational configuration we recomend for development of a multi-campus system for Metropolitan Junior College. It also shows isolines of travel-time from each of the three locations. These represent 15-minute sectors, and together, encompass most of the district. Twenty-minute isolines cover all but the most southern portion of the College District.

D. FACILITY NEEDS AND DEVELOPMENT COSTS

Gross classifications and distribution of projected space needs for the Junior College are shown on Table 4. For the central city campus, the space estimates account for the construction of permanent facilities and show the gross amount of square feet required in 1974 and 1980. For both the south and north campuses, the 1974 figures represent space distribution based on the construction of quality interim facilities. We are also recommending that a college union, or student and academic center, be constructed as a permanent feature of both the north and south campuses during the first phase of development. The 1980 figures represent permanent facilities for enrollment design levels anticipated at that time.

The logic of constructing interim facilities on both the north and south campuses was derived from our "need-service" evaluation of the location alternatives. It is clear, that by 1974-1975, the enrollment demand for Metropolitan Junior College will far exceed the capacity of the district to construct facilities to house all students at that time in permanent structures. For example, a plan to construct more permanent facilities at either the north or the south campus with present available funds would not only reduce the amount of space available for educational programs at the central city campus but it would also

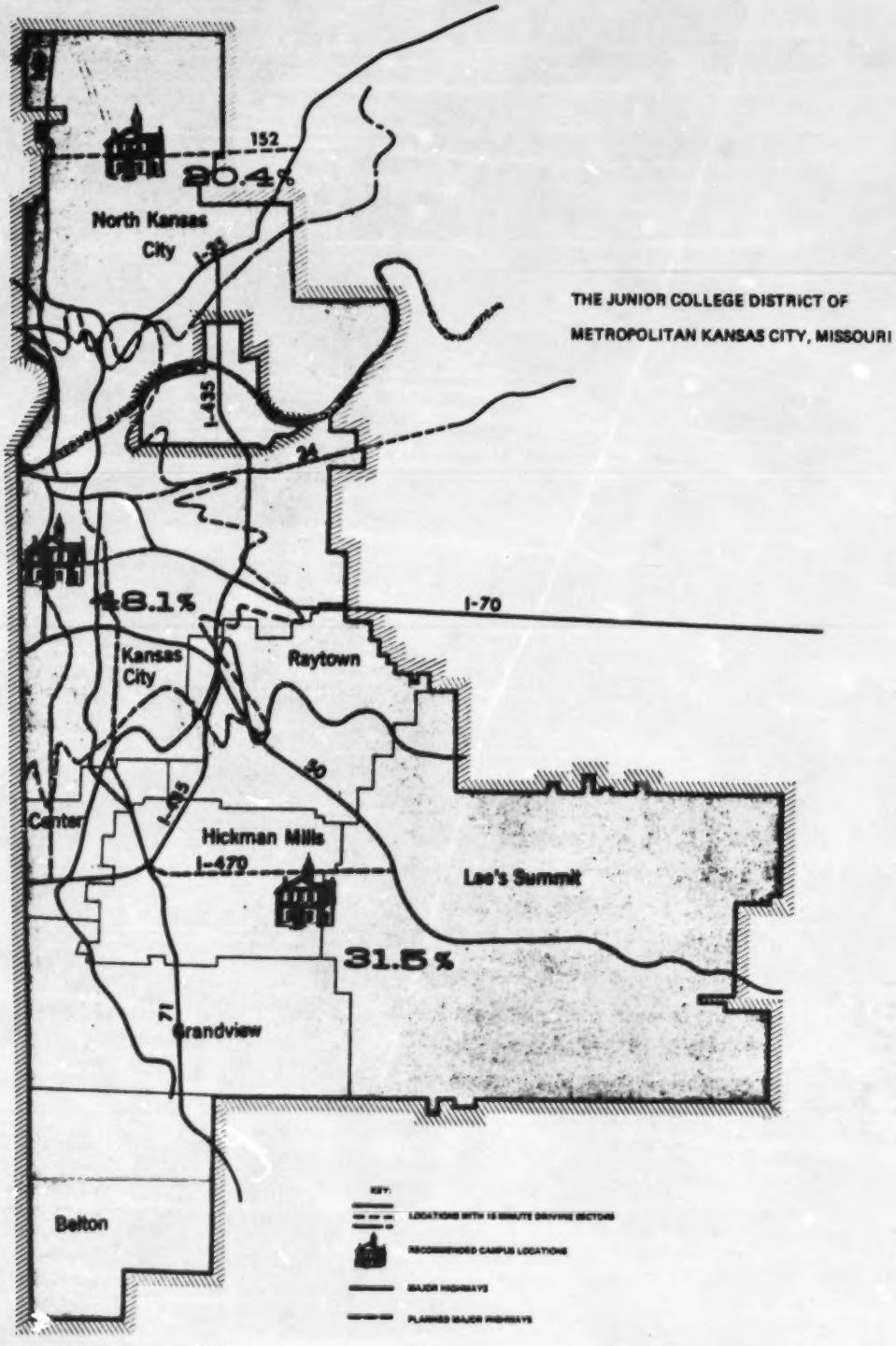

FIGURE II RECOMMENDED CAMPUS LOCATIONS WITH 15 MINUTE DRIVING SECTORS AND ESTIMATED PERCENT DISTRIBUTION OF ENROLLMENT, 1975

TABLE 4
CLASSIFICATION AND DISTRIBUTION OF PROJECTED MJC-KC SPACE DEMAND
(In Square Feet)

Facility Type	City Center		Suburban			
			South		North	
	1974	1980	1974	1980	1974	1980
(FTE Day Design Level)	3,500	5,000	2,500	4,500	1,500	2,500
Administration	38,850	55,500	8,922	47,250	5,188	26,250
Library	32,550	46,500	7,418	39,150	4,312	21,750
Classrooms, Lecture and Office	147,525	210,750	36,872	194,400	21,437	108,000
Academic Laboratories	50,400	72,000	11,503	60,750	6,688	33,750
Technical Laboratories	92,925	132,750	21,285	112,050	12,375	62,250
Student and Academic Center	67,725	96,750	55,000	108,000	35,000	60,000
Theatre-Auditorium	27,300	39,000	6,128	32,400	3,562	18,000
Gymnasium	29,925	42,750	6,772	35,775	3,938	19,875
Building Services and Other	37,800	54,000	8,600	45,225	5,000	25,125
Total	*525,000*	*750,000*	*217,500*	*675,000*	*132,000*	*375,000*

Source: Arthur D. Little, Inc., based on recent building programs for community colleges prepared by ADL and others. Also based on State of California standards and recent New York State construction. Figures adjusted for technical program emphasis.

reduce the amount of space available for a full range of programs at both the north and south campuses. The reason for this is the cost differential between provision of permanent and interim facilities. We believe the plan we are recommending will come as close as possible to meeting the anticipated educational needs of all students seeking higher educational opportunities at the Junior College.

Estimated development costs for the Junior College during the first phase of expansion, from 1968-1974 are shown on Table 5. The cost estimates are based on recent construction costs in Western Missouri. For the center city site, they reflect different per square foot costs for different types of structures. The cost of administration, classrooms, offices and library spaces includes an estimate of $725,000 for purchase of the Westport building as the central administration offices and for other district-wide service activities. For the north and south campuses, the estimated cost for interim facilities is based on an $8 per

TABLE 5
DEVELOPMENT COSTS FOR METROPOLITAN JUNIOR COLLEGE FOR FIRST PHASE TO 1974–1975
(dollars)

		Campus Location		
		North	*Center City*	*South*
1.	Day FTE Student Design Level	1,500	3,500	2,500
2.	Gross Space Requirements (sq. ft.)	132,500	525,000	217,500
3.	Site			
	a) Size (acres)	100	30	100
	b) Land Costs	$250,000	$4,979,700	$300,000
	c) Acquisition and Administrative Costs(1)	15,000	298,000	18,000
	d) Site preparation and utilities(2)	209,500	803,700	342,500
4.	Facilities			
	Administration, Classrooms, Offices and Library	780,000		1,300,000
	Academic and Technical Laboratories and Service	(3)	5,402,300	(3)
	Student and Academic Center	(3)	4,013,100	(3)
	Gymnasium	875,000	2,565,700	1,375,000
	Parking	(3)	568,500	(3)
		440,000(4)	2,800,000(5)	750,000(6)
5.	Architectural Fees (6% of Building & Site work)	138,300	1,012,700	226,200
6.	Furnishings and Equipment (15% of Building Construction Cost or approximately $3.85 per gross square feet)	510,000	1,867,300	837,400
7.	Administration & Other Services (1% of Total Project Cost)	29,200	250,400	51,500
	TOTAL COST	2,947,000	25,286,500	5,200,600
	GRAND TOTAL		$33,434,100	

1. Includes real estate brokerage fees and other service costs of land acquisition.
2. 10% of building costs for suburban development, 5% for urban development.
3. These spaces included in total opposite "Facilities".
4. Provides for 1100 cars at $400 cost per space.
5. Provides for 1400 cars at $2000 cost per space.
6. Provides for 1875 cars at $400 cost per space.

square foot equivalent construction cost, depending upon the type of arrangement negotiated with a builder. In some instances, it has been possible to provide interim facilities at a lower cost figure. The most notable example occurred recently at Illinois Central College where the equivalent construction cost was $5.76 per square foot. This was based on a 4-year bid lease agreement where the contractor is obligated to remove the space at the end of the contract period.

Estimates for the cost of constructing parking spaces are based on average costs of constructing permanent paved parking for the north and south campuses and a parking garage for the center city campus. We believe a parking garage for the center city campus would be the most economical use of district funds. The space can be constructed in such a way that it will not interfere with the construction of academic facilities and it will provide the most efficient use of the scarce urban land. In the future, for open paved parking in the center city area, it will be increasingly difficult to justify the expense of maintaining such a low-density utilization of high-cost land. Open paved parking today, for example, could cost as much as structured parking depending on land values, landscaping and security treatment of the parking area. A recent article in *Traffic Quarterly* on parking trends and recommendations showed average construction of off-street permanent parking lots at $750 per space. If land costs $3 per square foot, this could amount to a total of $1,800 to $2,000 per automobile – a cost that is currently being reached for parking structures.

E. FINANCIAL RESOURCES AND OPERATING REQUIREMENTS

As noted above, the recommended development program for Metropolitan Junior College is estimated to cost approximately $33.4 million. Table 6 shows our estimates of minimum and maximum resources for the first phase of development. The probable minimum is based on our evaluation of basic funding resources available to the College above and beyond the authorized general obligation bonds. Federal grants-in-aid are based upon our estimate of project costs that would be eligible under Title I and Title IV of the Higher Educational Facilities Act of 1965. The estimates take into account the fact that most institutions have been receiving less than their authorized maximum. We believe, however, that in view of Metropolitan Junior College's need, the institution would be placed in the highest priority category for allocation of federal funds by the state.

If the maximum is available, this estimate is shown in the second column of Table 6. In addition to federal grants and college union revenue bonds authorized under Missouri law, there is a strong likelihood that the College will be able to obtain additional funding through a combination of state grants-in-aid, revenue-bond-financing of parking facilities and private donations. Considering the types of projects for which the College could make application, such as assistance in constructing a parking garage, $2 million is a reasonable minimum expectation. It is noteworthy that the total likely maximum could add almost $4.3 million to the college's development resources.

Estimates of operating revenues and anticipated future operating costs are shown on Table 7. The first column of figures represent the standard distribution of

TABLE 6
ESTIMATED MINIMUM AND MAXIMUM RESOURCES
FOR THE FIRST PHASE OF DEVELOPMENT
($000's)

	Probable Minimum	*Likely Maximum*
General Obligation Bonds	$25,000	$25,000
Federal Grants*		
Title I	3,445	4,598
Title IV	402	804
College Union Revenue Bonds	2,650	4,079
Combination of State Grant-in-Aid, Revenue Bond Financing of Parking Facility and Private Gifts	2,000	3,300
TOTAL	$33,497	$37,781

*Higher Education Facilities Act 1965

operating revenue based on averages of all Missouri junior colleges. The total revenue of $10.2 million is projected to be the operating cost in 1974-75 for MJC. This is based on 50% full-time equivalent student enrollment in transfer programs and 50% in occupational programs. It is assumed that costs will grow to $800 per transfer student and a minimum of $1200 per occupational education student.

The second revenue column is based on current Metropolitan Junior College sources for items 1-4. Other revenue sources are carried over from the previous distribution, although it is recognized that such funds will not necessarily be available in those amounts. State and local tax income is based on the current statutory limitation on tax levies without voter approval and assumes an average annual growth in assessed valuation of 3%. What is noteworthy is, that under current financing sources, the Junior College will not be able to meet its operating budget in 1974-1975. In fact, it is likely that the point of imbalance will have been reached several years prior to that time.

We have made a number of recommendations for the College to seek to increase its levels of revenue. This comparative chart is evidence of the critical need for active pursuit of this objective. The last column of Table 7 shows, for example, that a surplus could be achieved if the statutory limitation on the tax levy were raised to 20 cents along with increases in tuition and student fees, and more notably, in the Missouri state foundation program.

TABLE 7

ESTIMATED LEVELS OF MJC-KC INCOME IN 1974-75, BY SOURCE, UNDER ALTERNATIVE ASSUMPTIONS
(Operating Costs Estimated at $10.2 Million)

INCOME	*Standard Distribution of Operating Revenue*		*Revenue Based on Current MJC Sources*		*Revenue Based on Increases of Limits on Current Sources*	
	Dollars	*Percent*	*Dollars*		*Dollars*	
State and Local Taxes	4,998,000	49.0	1,835,895	(1)	3,671,790	(5)
Student Fees	1,581,000	15.5	979,200	(2)	1,468,800	(6)
State Aid and Appropriations	2,550,000	25.0	3,264,000	(3)	5,100,000	(7)
Student Activities	112,200	1.1	240 200	(4)	408,000	(8)
Other Government Appropriations	408,000	4.0	408,000		408,000	
Private Gifts and Grants	51,000	0.5	51,000		51,000	
Endowment Earnings	–	–	–		–	
Investment Income	244,800	2.4	244,800		244,800	
Sales of Educ. Depart. and Other Income	10,200	0.1	10,200		10,200	
Auxiliary Enterprises	244,800	2.4	244,800		244,800	
Scholarships and Fellowships	–	–	–		–	
TOTAL	10,200,000	100.0	7,277,895		11,607,390	

Source: Arthur D. Little, Inc., and Missouri Commission of 1968-69 Appropriations Recommendations and 1966-67 Institutional Reports of Income and Expenditure (November 1967)

TABLE 7 ESTIMATED LEVELS OF MJC–KC INCOME IN 1974-75, BY SOURCE, UNDER ALTERNATIVE ASSUMPTIONS (CONT.)

NOTES:

(1) At a ten cent levy imposed on all taxable property in the MJC–KC District, with the estimated revenue that could now be derived growing at an assumed 3 percent a year.

(2) Assumed at $4/credit hour. Thus, assuming that an FTE student carries 12 credit-hours/semester, this leads to $96/academic year per FTE student.

(3) Assumed at $320 per FTE student, which is the current rate.

(4) Assumed at the current level of $10 per FTE student per semester ($20 per FTE student/academic year).

(5) At a 20 cent levy imposed on all taxable property in the MJC–KC District, with the estimated revenue that could now be derived growing at an assumed 3 percent a year.

(6) Assumed at $6/credit hour. Thus, assuming that a FTE student carries 12 credit-hours/semester, this leads to $144/academic year per FTE student.

(7) Assumed at one-half or fifty percent of total operating cost, as has been recently recommended.

(8) Assumed at a projected (estimated) level of $20 per FTE student per semester ($40 per FTE student/academic year).

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